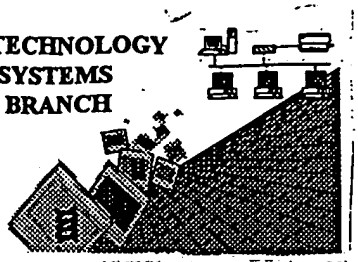
Burke B

10D12

BIOTECHNOLOGY SYSTEMS BRANCH



RAW SEQUENCE LISTING ERROR REPORT

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Application Serial Number: 09/623,304
Source: 1647
Date Processed by STIC: 3/7/02

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FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

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Revised 01/29/2002

1647

Does Not Comply
Corrected Diskette Needed

RAW SEQUENCE LISTING DATE: 03/07/2002
PATENT APPLICATION: US/09/623,304 TIME: 10:29:16

Input Set : A:\-4-1.app
Output Set: N:\CRF3\03072002\I623304.raw

<110> APPLICANT: Silvia, Christopher
Yu, Weifeng
ICAgen, Inc.
<120> TITLE OF INVENTION: Identification and Expression of Human Kir5.1
<130> FILE REFERENCE: 018512-000410US
<140> CURRENT APPLICATION NUMBER: US 09/623,304
<141> CURRENT FILING DATE: 2001-02-21
<150> PRIOR APPLICATION NUMBER: US 60/076,612
<151> PRIOR FILING DATE: 1998-03-03
<150> PRIOR APPLICATION NUMBER: WO PCT/US99/04549
<151> PRIOR FILING DATE: 1999-03-02
<160> NUMBER OF SEQ ID NOS: 4
<170> SOFTWARE: PatentIn Ver. 2.1
<210> SEQ ID NO: 1
<211> LENGTH: 383
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<220> FEATURE:
<223> OTHER INFORMATION: human Kir5.1 alpha subunit monomer of inward rectifier potassium channel
<220> FEATURE:
<221> NAME/KEY: PEPTIDE
<222> LOCATION: (351)..(383)
<223> OTHER INFORMATION: tail region

must give location and explain what residue Xaa represents — see p. 4

<400> SEQUENCE: 1

```
Met Ser Tyr Tyr Gly Ser Ser Tyr His Ile Ile Asn Ala Asp Ala Lys
 1               5                  10                  15
Tyr Pro Gly Tyr Pro Pro Glu His Ile Ile Ala Glu Lys Arg Arg Ala
            20                  25                  30
Arg Arg Arg Leu Leu His Lys Asp Gly Ser Cys Asn Val Tyr Phe Lys
        35                  40                  45
His Ile Phe Gly Glu Trp Gly Ser Tyr Val Val Asp Ile Phe Thr Thr
    50                  55                  60
Leu Val Asp Thr Lys Trp Arg His Met Phe Val Ile Phe Ser Leu Ser
65                  70                  75                  80
Tyr Ile Leu Ser Trp Leu Ile Phe Gly Ser Val Phe Trp Leu Ile Ala
                85                  90                  95
Phe His His Gly Asp Leu Leu Asn Asp Pro Asp Ile Thr Pro Cys Val
            100                 105                 110
Asp Asn Val His Ser Phe Thr Gly Ala Phe Leu Phe Ser Leu Glu Thr
        115                 120                 125
Gln Thr Thr Ile Gly Tyr Gly Tyr Arg Cys Val Thr Glu Glu Cys Ser
    130                 135                 140
```

RAW SEQUENCE LISTING DATE: 03/07/2002
PATENT APPLICATION: US/09/623,304 TIME: 10:29:16

Input Set : A:\-4-1.app
Output Set: N:\CRF3\03072002\I623304.raw

```
    57 Val Ala Val Leu Met Val Ile Leu Gln Ser Ile Leu Ser Cys Ile Ile
    58 145                 150                 155                 160
    59 Asn Thr Phe Ile Ile Gly Ala Ala Leu Ala Lys Met Ala Thr Ala Arg
    60                 165                 170                 175
    61 Lys Arg Ala Gln Thr Ile Arg Phe Ser Tyr Phe Ala Leu Ile Gly Met
    62             180                 185                 190
    63 Arg Asp Gly Lys Leu Cys Leu Met Trp Arg Ile Gly Asp Phe Arg Pro
    64         195                 200                 205
    65 Asn His Val Val Glu Gly Thr Val Arg Ala Gln Leu Leu Arg Tyr Thr
    66     210                 215                 220
    67 Glu Asp Ser Glu Gly Arg Met Thr Met Ala Phe Lys Asp Leu Lys Leu
    68 225                 230                 235                 240
    69 Val Asn Asp Gln Ile Ile Leu Val Thr Pro Val Thr Ile Val His Glu
    70                 245                 250                 255
    71 Ile Asp His Glu Ser Pro Leu Tyr Ala Leu Asp Arg Lys Ala Val Ala
    72             260                 265                 270
    73 Lys Asp Asn Phe Glu Ile Leu Val Thr Phe Ile Tyr Thr Gly Asp Ser
    74         275                 280                 285
W--> 75 Thr Gly Thr Ser His Gln Ser Arg Ser Ser Tyr Val Pro Arg Xaa Ile
    76     290                 295                 300
    77 Leu Trp Gly His Arg Phe Asn Asp Val Leu Glu Val Lys Arg Lys Tyr
    78 305                 310                 315                 320
    79 Tyr Lys Val Asn Cys Leu Gln Phe Glu Gly Ser Val Glu Val Tyr Ala
    80                 325                 330                 335
    81 Pro Phe Cys Ser Ala Lys Gln Leu Asp Trp Lys Asp Gln Gln Leu His
    82             340                 345                 350
    83 Ile Glu Lys Ala Pro Pro Val Arg Glu Ser Cys Thr Ser Asp Thr Lys
    84         355                 360                 365
    85 Ala Arg Arg Arg Ser Phe Ser Ala Val Ala Ile Val Ser Ser Trp
    86     370                 375                 380
    89 <210> SEQ ID NO: 2
    90 <211> LENGTH: 1509
    91 <212> TYPE: DNA
    92 <213> ORGANISM: Homo sapiens
    94 <220> FEATURE:
    95 <223> OTHER INFORMATION: human Kir5.1 alpha subunit monomer of inward
    96       rectifier potassium channel
    98 <220> FEATURE:
    99 <221> NAME/KEY: unsure
   100 <222> LOCATION: (1279)
   101 <223> OTHER INFORMATION: n = a, g, c or t
   103 <400> SEQUENCE: 2
   104 ttactactac aaaactcacc tggatcccta agggcacagc aaagaatgag ctattacggc 60
   105 agcagctatc atattatcaa tgcggacgca aaatacccag gctacccgcc agagcacatt 120
   106 atagctgaga agagaagagc aagaagacga ttacttcaca aagatggcag ctgtaatgtc 180
   107 tacttcaagc acatttttgg agaatgggga agctatgtgg ttgacatctt caccactctt 240
   108 gtggacacca agtggcgcca tatgtttgtg atattttctt tatcttatat tctctcgtgg 300
   109 ttgatatttg gctctgtctt ttggctcata gcctttcatc atggcgatct attaaatgat 360
   110 ccagacatca caccttgtgt tgacaacgtc cattctttca caggggcctt tttgttctcc 420
```

RAW SEQUENCE LISTING DATE: 03/07/2002
PATENT APPLICATION: US/09/623,304 TIME: 10:29:16

Input Set : A:\-4-1.app
Output Set: N:\CRF3\03072002\I623304.raw

```
    111 ctagagaccc aaaccaccat aggatatggt tatcgctgtg ttactgaaga atgttctgtg 480
    112 gccgtgctca tggtgatcct ccagtccatc ttaagttgca tcataaatac ctttatcatt 540
    113 ggagctgcct tggccaaaat ggcaactgct cgaaagagag cccaaaccat tcgtttcagc 600
    114 tactttgcac ttataggtat gagagatggg aagctttgcc tcatgtggcg cattggtgat 660
    115 tttcggccaa accacgtggt agaaggaaca gttagagccc aacttctccg ctatacagaa 720
    116 gacagtgaag ggaggatgac gatggcattt aaagacctca aattagtcaa cgaccaaatc 780
    117 atcctggtca ccccggtaac tattgtccat gaaattgacc atgagagccc tctgtatgcc 840
    118 cttgaccgca aagcagtagc caaagataac tttgagattt tggtgacatt tatctatact 900
    119 ggtgattcca ctggaacatc tcaccaatct agaagctcct atgttccccg araaattctc 960
    120 tggggccata ggtttaatga tgtcttggaa gttaagagga agtattacaa agtgaactgc 1020
    121 ttacagtttg aaggaagtgt ggaagtatat gccccctttt gcagtgccaa gcaattggac 1080
    122 tggaaagacc agcagctcca catagaaaaa gcaccaccag ttcgagaatc ctgcacgtcg 1140
    123 gacaccaagg cgagacgaag gtcatttagt gcagttgcca ttgtcagcag ctggtgaaaa 1200
    124 ccctgaggag accaccactt tcgccacaca tgaatatagg gaaacacctt atcagaaagc 1260
W--> 125 tctccctgac tttaaacang aatcctctgt wgaatcccaa atgttagtcc taaaattgca 1320
    126 attatgaggg ctaccactga atcattttat ctttcagcca atcaagtcgt tgtaaacgtg 1380
    127 gctttttga aagtgttatg gctatgtttt atgatgatgc tgggtaagta gagtaagtta 1440
    128 aacttggtaa aagataatct aaaaattcca tagttctcag ttattaaaat ttttcttgtt 1500
    129 ccggaattc                                                        1509
    131 <210> SEQ ID NO: 3
    132 <211> LENGTH: 24
    133 <212> TYPE: DNA
    134 <213> ORGANISM: Artificial Sequence
    136 <220> FEATURE:
    137 <223> OTHER INFORMATION: Description of Artificial Sequence:primer
    139 <400> SEQUENCE: 3
    140 cctaagggca cagcaaagaa tgag                                        24
    142 <210> SEQ ID NO: 4
    143 <211> LENGTH: 20
    144 <212> TYPE: DNA
    145 <213> ORGANISM: Artificial Sequence
    147 <220> FEATURE:
    148 <223> OTHER INFORMATION: Description of Artificial Sequence:primer
    150 <400> SEQUENCE: 4
    151 gtgtggcgaa agtggtggtc                                            20
```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 03/07/2002
PATENT APPLICATION: **US/09/623,304** TIME: 10:29:18

Input Set : **A:\-4-1.app**
Output Set: **N:\CRF3\03072002\I623304.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 303
Seq#:2; N Pos. 1279

VERIFICATION SUMMARY DATE: 03/07/2002
PATENT APPLICATION: **US/09/623,304** TIME: 10:29:18

Input Set : **A:\-4-1.app**
Output Set: **N:\CRF3\03072002\I623304.raw**

L:75 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:288
L:125 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:1260